

Mediating for Climate Change: Falling Up to Hyperignorance, Diving Down to Deep Waters, to Touch Other(s) (and Ourselves)

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For almost my entire life, I have been perplexed at my/our inaction towards climate change. Inundated with scientific data, reportage, an overwhelming scientific consensus of not only the phenomenon, but also our part in it, I wonder about why we are not only reluctant to act, but incapable of it. There is an extensive literature exploring such questions, from behavioural sciences, to feminist theory, to economics and global systems science.¹ However, while this literature helps to explain various facets of the problem, there are still few examples of work synthesising multiple approaches or using these to inform production of an intervention or action.²

I am particularly interested in the role of emotion in our relationship to climate change. A recent study by Smith and Leiserowitz found that acceptance of public policy for climate change depended on whether respondents felt 'worry' or 'disgust' when confronted with the problem.³ The response to these emotions is explored by Sally Weintrobe who discusses the various psychological responses that explain why we repress or disavow climate change data and the scientific consensus: 'While we can be incapacitated by anxiety when thinking about climate change, we are, in a realistic sense, not nearly anxious enough... Anxiety is, I suggest, the biggest psychic barrier to facing the reality of anthropocentric global warming'.⁴ Weintrobe suggests that we should find ways to support each other in overcoming this anxiety.

For me, the question has more facets. It relates to our world-view, our perception of how we know and what we know, and the consequence for our own feelings of agency. In my artistic practice, I synthesise learning and knowledge-making practices from multiple disciplines, including chemistry, critical philosophy and aesthetics, to interrogate various aspects of creating new knowledge, and giving authority and agency to it. This paper focusses on an attempt to move beyond anxiety and disgust as primary emotional responses to climate change by working with empathic responses.⁵ I elaborate here upon a framework of knowing – and acceptance of unknowing – and outline my attempt to address emotional response to climate change by engendering empathy with a fragile, alien species affected by anthropogenic effects on the environment in the form of an artwork: the *Coral Empathy Device* (2016). This work explores the possibility of creating a legitimate form of conveying embodied knowledge between the human species and non-humans. It allows the creation of an analogue of social interactions and empathy with other species as a first step towards engendering empathy with regions and ecosystems.

The crucial choice of the other(s) with which to empathise was made by considering a synthesis of perspectives from previous studies of first, social cognition, where the other is a distinct entity thereafter incorporated into the self, and the resulting emotional connectedness;⁶ second, environmental psychology, where the other is considered in terms of environmental connectedness;⁷ and third, the corporeal other – the other that we touch.⁸ It was important to choose a species with which humans are not overly familiar, to move beyond ‘companion species’ – in Donna Haraway’s terms – who share our lives, our timescale and resonances of our physiology, and rather emotionally commune with a species at the front line of environmental shifts.⁹ In so doing, it is my contention that it may be possible to intervene with art that leverages the body to mobilise emotional knowledge and therefore intervene in environmental action, and create motivations for change that arise from care and empathy for other(s). In the language of philosophy and the environmental humanities, this is also an experiment in facilitating the realisation of ‘becoming-with’¹⁰ an-other(s) to overcome what Kate Wright terms ‘delusions of separation – the erroneous belief that it is somehow possible to exempt ourselves from Earth’s ecological community’.¹¹ In this way, we may feel our connectedness to the systems and species of the Earth. Drawing on environmental and social psychological research, the inclusion of the other(s) in one’s perception of self increases the value of the other(s), thus increasing motivation for addressing environmental concerns.¹² In contrast to most studies that explore empathy for nature,¹³ the *Coral Empathy Device* moves beyond visual stimuli to engender empathy, working through sound and haptic stimuli in an attempt to create a stronger and more lasting emotional response.

To Know Another

The *Coral Empathy Device* is both a synthesis of multiple knowledges, and an effort to codify in a tangible, physical interface, embodied knowledge as a route to the emotional self. In other words, it is an attempt to interrogate the boundaries between the self and other(s). Prompted by my interest in the aquatic environment and our relationship to its alien nature, the *Coral Empathy Device* is a wearable multi-sensory experience that fosters empathy and embodiment as forms of knowledge, exploring them as a technologically mediated means for connecting with the marine environment. The premise is to translate coral’s experience of anthropogenic effects in its native environment of water into human-perceivable signals in the native environment of humans.

Perry’s work on empathy suggests that when we live close to the land we experience empathy with it.¹⁴ It also claims that our present mode of life has led to the ‘death of empathy’.¹⁵ Digital life, comfort and protection from the elements have combined to weaken our connection to what we consider the ‘natural’ world.

The *Coral Empathy Device* is a step towards exploring ways to engender this empathy, and this paper claims its significance is in terms of our relationship to the self, other(s) and the environment.¹⁶ Karen Barad asks, ‘What if it is only in the encounter with the inhuman – the liminality of no/thingness – in all its liveliness, its conditions of im/possibility, that we can truly confront our inhumanity, that is, our actions lacking compassion?’¹⁷ The aim of the *Coral Empathy Device* is to create an encounter with the non-human (rather than the inhuman), and thereby to touch this liminality, the border between the self and other(s). Through making this artwork, I propose that bridging this boundary, and incorporating the other into the

self-creating empathy and social cognition through an embodied mediation with a non-human entity, is a strategy to motivate individual action to overcome anthropogenic environmental damage.¹⁸



Kat Austen, *Coral Empathy Device*, sound and mixed media installation, 2016 (pictured at Kühlhaus, Berlin, 2017). View video documentation of the *Coral Empathy Device* online: <http://www.oarplatform.com/mediating-climate-change-falling-hyperignorance-diving-deep-waters-touch-others-ourselves/>.

On Knowing and The Unknown

The *Coral Empathy Device* is a response to the ‘wicked problem’ of climate change.¹⁹ Climate change, like other ‘wicked’ problems, is so interconnected with other systemic factors that it is difficult to find a solution.

Emotional response is a key factor in many of the choices we make and in particular in relation to environmental issues as discussed above.²⁰ Timothy Morton conceptualises climate change as a ‘hyperobject’ which occurs at a length-scale and timescale greater than that which we are used to internalising.²¹ In terms of climate change, we often lack personal experience of the cycle of cause and effect between our actions and global changes, which affects our decisions over how to act and counteract.²² Yet these effects are felt more keenly by fragile ecosystems and species such as coral. Using the *Coral Empathy Device*, I question whether it is possible to convey a coral’s experience of environmental damage through an artwork to create a mediated, emotive feedback between humans and other(s).

I propose that the concept of hyperignorance can help explain our experience of and response to hyperobjects. In the early 500s AD, Damascius, the last chair-holder of the Platonic succession of the Athenian Academy, coined the term 'hyperignorance'.²³ Hyperignorance is described by Raoul Mortley thus:

referring to Plato's analogy about seeing the sun (Rep. 532A), Damascius notes that at first one sees it from afar. The closer one approaches, the less one sees of it, and in the end one sees neither it nor the other things outside it. The eye being flooded with light becomes the light itself.²⁴

What would be the consequences to our response to climate change of embracing hyperignorance? And how should we do so? Damascius's hyperignorance is related to the Neoplatonic concept of 'the One' – the single principle that in Neoplatonism is considered the source of all things.²⁵ Mortley describes Damascius' hyperignorance as a higher principle that goes beyond the One:

This higher principle obscures the One by its proximity. What does this mean? Seemingly that as we approach it, it floods our whole seeing apparatus with its own presence, to the extent that all else is obliterated from view. The hyperunknowable principle floods the mind's eye, so that even the One becomes an other, which disappears from view.²⁶

Commentators have claimed that here Damascius was discussing theology, and that the One transcends being.²⁷ But there is something else that transcends even the One: hyperignorance – that which is unknowable.

To understand this in non-theological terms we can look to a more modern conception of this same idea that emerged in the shadow of the Second World War in the writing of Günther Anders.²⁸ In the 1950s, at the time when the human race seemed on the brink of self-destruction due to the atom bomb, Anders argued that humans make systems that are too complex for themselves to understand.²⁹ Indeed, Damascius's hyperignorance, viewed through Anders's lens and in a contemporary light, could as easily be applied to complex systems containing emergence as to a transcendent 'One'. This modern reconfiguration is particularly pertinent to addressing those feelings of anxiety that have been identified as key paralysing factors when addressing human action on climate change.³⁰ If we accept the direct unknowability of our complex systems and their emergent wicked problems, perhaps we can find a way to act within the realm of what we do or can know. While Damascius didn't indicate how to embrace hyperignorance, his ideas were taken up in theology that talks about God only in terms of negation. This apophatic theology is rooted in direct experience, and argues that God cannot be known without the help of experience,³¹ which allows the divine to be understood by the way it acts on the world, a kind of knowing through a filter.

As an artist, I am stimulated by Robert Smithson's approach to knowing the complex essence of what we commonly term nature by looking through filters. Smithson explored the dialectic between mirrors and reflections, site and nonsite. Johannes Stuekelburger writes that by focusing on the nonsite work such as Smithson's *The Sandbox Monument / The Desert* (a photograph of a sandbox bounded by solid wooden walls and surrounded by savanna) brings into focus the real essence of the site – 'nature' – in this case, the wild and entropic land around the sandbox construction.³²

In order to make *Incidents of Mirror Travel in the Yucatan*, a performative intervention for which the only record is written afterwards by the artist for Artforum,³³ Smithson visited nine sites, and at each he temporarily inserted around a dozen mirrors into the landscape. Stuekelburger argues that by using multiple mirrors, Smithson was embracing a polyper-spectival view on nature: ‘Smithson was interested not only in a traditional view, focused on the centre, on the site in the sense of the real places visible in his photographs; he was also interested in expanding the focus to the edges of the site to which the mirrors refer’.³⁴ Thus, Smithson, by viewing the site through the filter of multiple mirrors, and by experiencing and playing with that experience, reveals an expanded understanding of the enormity of nature contained in these accessible, human-scale bites of landscape.

If, like Smithson, we focus on what we can experience, albeit through a filter, we get closer to knowing what is unknowable and what is not known. By expanding the realm of what we can experience – in the case of the *Coral Empathy Device* through a focus on direct experience with the body schema of other creatures or environments – we can draw closer to the wicked problem of climate change.

The Limitations of Verbal and Visual Representation

I suggest that this focus on experience could be the key to moving beyond ourselves and embracing hyperignorance, by incorporating more than codifiable knowledge in our lexicon of communicating between the self and other(s), and thereby creating an empathic connection.

Barad explains that when exploring matter on a sub-atomic level, the quantum nature of matter gives rise to an infinite number of possibilities of ‘self-touching’ – ways in which particles and fields can interact with themselves.³⁵ This questions the very identity of the particles/fields that are touching, leaning towards a fluidity of states of being that gives rise to temporally relevant truths, and a sense of the unknown, perhaps even the unknowable. Here Barad comes to the same conclusion as Damascius, but from a different disciplinary starting point: ‘the unknown, the insensible, new realms of in/determinacy, which have incalculable effects on mattering, need to be acknowledged, or, even better, taken into account’.³⁶

Marcel Viau, writing from a theological standpoint, also argues for knowing through experience. He makes the argument that the experience of the divine, anchored in an environment, pushes the individual consciousness to create a social context, to create a shared understanding, a commonality.³⁷ As Viau argues, it is not enough to talk, or write, about the principles of faith in God. He uses this argument as a basis for what is regularly termed ‘practical theology’ – theology rooted in experience of the world, whether that be experience of or with people or non-humans. Practical theology builds on phenomenological arguments about moving beyond speech into silence,³⁸ the argument that the corporeal experience of the world is what gives rise to meaning, and creates a situation in which language can arise.

This moving beyond language is an important modality in realising hyperignorance by creating the interconnection between the self and other(s). S. N. Ganguly also argues that language is not enough for us to connect to each other.³⁹ Indeed, for Ganguly, our reliance on this codification of experience leads to an underlying angst of constantly being

misunderstood. Thus, he continues, we reside in an ‘existential vacuum’ that arises because of a mismatch between our desire to be understood and the limitations of language oriented culture. For Ganguly, this tension is expressed not only as a mismatch between the navigation of the individual in society, but also in terms of our inability to express and be understood when we are limited by the primary channel of verbal communication, which itself has an inherent vagueness in the naming of things. He argues further that the resulting separation of the individual from society itself results in insecurity. But Ganguly has hope that we can overcome the limitations of codified language.

we should not be understood to mean that communication is just impossible; we are merely asserting that there is only an essential vagueness in the meaning of such terms to the result that we are always aware of a possibility of misunderstanding.⁴⁰

Ganguly predates the proliferation of screen-mediated social interactions,⁴¹ which have collapsed communication channels to visual, and often verbal communications. We aim with language to root our idea of truth in the public realm, to know ourselves and know the other, yet our efforts are constantly undermined by the uncertainty of interpretation. By augmenting our modes of communication between the self and other(s), it could be possible to find the compassion for other entities that allows us to not just seek for solutions to problems, but to overcome ourselves in order to change our interaction with the world, to become as part of it rather than to be isolated as an individual afraid of our loneliness in the world.

Experiencing Through the Body – Conveying Embodied Knowledge

My artistic practice draws on the sciences, the humanities, technology design, aesthetics and arts to investigate ways to create an adequate lexicon in hitherto un-codified (tacit) knowledges, and to place these knowledges alongside others upon which we rely. Important to this task is the claim from classic phenomenology which contends that the experience of the world is through the body-schema and its response to the affordances of the world. As phenomenologist Emmanuel Levinas, whose work underpins much of my artistic approach, writes about the grandfather of phenomenology, Merleau-Ponty: “That belonging of the I think “to the flesh” is not a metaphor for Merleau-Ponty... Flesh then, as objective body is thus constituted for consciousness out of “powers” that are already tributary to this body. Consciousness turns out to have already called upon what it is only just supposed to be constituting’.⁴² In making the artwork, my question was how can the body-schema interact to create an emotional connection with other creatures – or other environments – that exist in modes or environments that are either difficult to touch, or dangerous to do so?

For the *Coral Empathy Device*, I also drew on the work of contemporary phenomenologist Shogo Tanaka. Tanaka has written extensively on intercorporeality in the human sphere; the idea that the body is a vehicle for our social cognition. Tanaka writes “Through these embodied interactions, intersubjective meanings are created and directly shared between the self and the other, without being mediated by mental representations’.⁴³ In this framework one could directly affect someone’s bodily experience, and therefore intentionally transmit embodied knowledge. Such claims build on the idea of embodiment being ‘doing without representing’ and personal space as an extension of the body schema, where: ‘the body schema is the converting system of perception and action’.⁴⁴ We exist bodily within a set of opportunities

to which we are invited to respond, and often do so without conscious framing of our responses. Rather we must consider that we are our bodies – our body-schema – and the interaction of the body-schema with other(s) creates knowledge of the otherness, and of interaction, within the body-schema.

In Tanaka's view, not only is there no duality between mind and body, but also none between that which is considered traditionally to be internal and external to the body. Indeed, this is true physically as well as philosophically. Membranes are permeable, skin is porous, our physical boundaries are in fact far more diffuse than we believe them to be, and the substance of our being is in constant flux. This suggests that what we consider to be our bodies is in fact a flux and flow of matter and energy with multiple grades which we perceive on different scales, giving us the perception of boundaries.

The *Coral Empathy Device* was created during a residency at NYU Shanghai Gallery and the NYU Shanghai Program for Creativity and Innovation. It is worn over the head, and deploys affordances of speaker technologies and sound conveyance, as well as touch and smell, to create a vibrating immersion that aims to bypass perception and disrupts usual modes of cognitive engagement. My initial research was into sound and microplastics.⁴⁵ I gathered audio recordings of the underwater environment in Bergen, Norway, some DIY Chemistry assessment of the prevalence of marine microplastics and researched their effect on corals. This initial research fits into a framework of knowledge hierarchies that explore the multi-scale interplay between humans and their environment. In other words, I began to think about how not to divorce humans from 'the environment' or 'nature', nor to imply that there is such a thing as humans having evolved beyond nature, but rather to explore the interplay along the continuum of human bodies and environments. With the *Coral Empathy Device*, I attempt to codify the knowledge that, following Tanaka, is imprinted in the body. I think of the knowing subject as the minded-body or embodied-mind.

How can one validate this engendering of interspecies empathy using embodied knowledge? And furthermore, how can one ascertain the effect of experiencing empathy for the other on feelings of agency in relation to climate change?

The next step for the *Coral Empathy Device* in would be to empirically capture reactions to it, and in this way to determine the success of this method of codification. Yet to validate such an approach, one encounters many of the issues that arise from attempting to validate subjective experience. The normative modes by which the experience can be codified involves standard measurement and data collection, which in its conventional form cannot capture the uncodifiable knowledge I attempt to convey with the device.

To test the efficacy and validity of the *Coral Empathy Device* would require an additional device that can measure rather than deliver at the embodied interface. Perhaps the best approximation that is imminently achievable, but that neglects longitudinal analysis, would be to combine arousal sensors (such as galvanic skin response sensors) with a body map,⁴⁶ or to ask visitors to create their own response to the work using a medium in which they feel most comfortable to express it.

Preliminary feedback from visitors to installations of the *Coral Empathy Device* show promise in terms of creating empathy for a non-human species, and in moving beyond

the anxiety or disgust dichotomy as our primary emotional responses to complicated environmental problems like climate change. The point of the *Coral Empathy Device* is to suggest that perhaps the best ‘measure’ of the validity of this approach is to accept that feelings and emotions themselves are not measurable, not codifiable, yet are nevertheless valid. Feelings such as empathy, or indeed the emotional response to an artwork like the *Coral Empathy Device*, are subjective. They are nevertheless materially consequential, because they affect our interactions between what is internal and external to the self. They mediate our touching of the world and our becoming-with in the world. With problems so wicked as climate change or widespread microplastic pollution, how can we afford to neglect such a large part of our lived experience? Thus, with a work devised as an intervention in our relationship to the other(s), perhaps it is best considered as one among many of the cohort of interventions with this aim – be they philosophical, artistic, scientific, governmental, regulatory, or otherwise – and to employ the best and only measure of its validity: to watch ourselves.

The ultimate direction that we will take as a species will be emergent from the cumulative responses to all of these interventions and those to come. My new artwork, *The Matter of the Soul*,⁴⁷ explores how far this approach can be expanded to the Arctic region, an ecosystem at the edge of climate changes. As with the *Coral Empathy Device*, my evaluation of its validity will begin with my own, subjective experience of the artwork, and whether it touches me in the way I hope it will touch others. However, when an individual’s empathy for nature is dispositional,⁴⁸ it is likely that what allows me to touch other(s) may not have the same result for other people. Further investigation will be needed to investigate how mediating through art the direct empathic experience of otherness might enable us to create an alternative emotional relationship to the hyperobject of climate change and environmental damage. By this process of viewing through a filter of otherness, it may be that we can catch sight of, and accept, hyperignorance, and finally feel facilitated in our ability to step forward and address anthropogenic perturbations in the complexity of our existence within and participation in the creation of the world.

- 1 For example: Robert Gifford, Christine Kormos and Amanda McIntyre, ‘Behavioral Dimensions of Climate Change: Drivers, Responses, Barriers, and Interventions,’ *WIREs Climate Change* 2 (2011): 801–27; Karen Barad, ‘On Touching – The Inhuman That Therefore I Am,’ *differences: A Journal of Feminist Cultural Studies* 25:3 (2012): 206–23; and William D. Nordhaus, ‘Economic Aspects of Global Warming in a Post-Copenhagen Environment,’ *PNAS* 107:26 (2010): 11721–26. The work of the Global Systems Science cluster of DG Connect at the European Commission includes a number of projects researching models that will predict the effect of policy decisions on climate change futures. For more information, readers are referred to a short report by the author at <https://ec.europa.eu/digital-single-market/news/report-meeting-projects-funded-global-systems-science-gss>, accessed 31 October, 2017.
- 2 The Aerocene project (<http://aerocene.org/>) and works curated by TBA21 (<https://www.tba21.org>), along with my own Vital (<http://vital-food.org>) all provide good examples of artistic interventions based on interdisciplinary synthesis of knowledge.
- 3 Nicholas Smith and Anthony Leiserowitz, ‘The Role of Emotion in Global Warming Policy Support and Opposition,’ *Risk Analysis* 34:5 (2014): 937–48.
- 4 Sally Weintrobe ‘The Difficult Problem of Anxiety in Thinking About Climate Change,’ in *Engaging with Climate Change: Psychoanalytic and Interdisciplinary Perspectives*, ed. Sally Weintrobe (New York: Routledge, 2013), 46
- 5 Invoked Empathic Response has been shown to motivate decision-making to preserve the environment by Jamie Berenguer in ‘The Effect of Empathy in Proenvironmental Attitudes and Behaviors,’ *Environment and Behavior* 39:2 (2007): 269–83. This research used visual stimuli to induce an empathic response, and questionnaires are used to record decisions made by participants on how money should be allocated to pro-environmental endeavours. Images used focussed on environmental problems that had a visible chain of consequence, such as a bird covered in oil. In comparison, the *Coral Empathy Device* aims to address environmental wicked problems that have a less directly perceptible chain of consequence, and to affect the audience using sound and haptic stimuli.
- 6 For example Arthur Aron and Barbara Fraley, ‘Relationship Closeness as Including Other in the Self: Cognitive Underpinnings and Measures,’ *Social Cognition* 17:2 (1999): 140–60.

- 7 P. Wesley Schultz, 'The Structure of Environmental Concern: Concern for Self, Other People and the Biosphere,' *Journal of Environmental Psychology* 21:4 (2001): 327-39.
- 8 Barad, 'On Touching,' 206-23.
- 9 Donna Haraway, *The Companion Species Manifesto: Dogs, People and Significant Otherness* (Chicago: Prickly Paradigm Press, 2003).
- 10 Donna Haraway, *When Species Meet* (London: University of Minnesota Press, 2008), 314
- 11 Kate Wright, 'Becoming-With,' *Environmental Humanities* 5:1 (2014): 278.
- 12 Schultz, 'Environmental Concern', 327-339
- 13 See, for instance, Berenguer, 'Empathy,' 269-83, and Kim-Pong Tam, 'Dispositional Empathy with Nature,' *Journal of Environmental Psychology* 35 (2013): 92-104.
- 14 Bruce D. Perry, 'The Death of Empathy?,' in *Evolution, Early Experience and Human Development*, ed. Darcia Narváez (Oxford: Oxford University Press, 2012), 199-201.
- 15 Perry, 'The Death of Empathy?,' 201.
- 16 I have chosen engender specifically as the word for the action of the coral empathy device because of its archaic additional meaning of begetting something. It is the conception of an emotion within us that should give birth to action.
- 17 Barad, 'On Touching,' 216.
- 18 In writing of anthropogenic environmental damage, it is to be understood that this linguistic formulation is a shorthand for a more complex understanding of a continuum between agentic, interconnected nodes in a system in which the individual self and other(s) can be considered as discrete or constituting a whole, depending on the scale at which the system is interrogated.
- 19 Wicked problems, often referred to in the field of design thinking, is a term first formulated to encompass those ill-defined problems of our time that are so interconnected that they might be considered overwhelmingly complex and difficult to solve through one intervention alone. (See C. W. Churchman, 'Wicked Problems,' *Management Science*, 14: 4 (1967): B-141 - B-142 and H.W.J. Rittel and M.M. Webber, 'Dilemmas in a General Theory of Planning,' *Policy Sciences*, 4 (1973): 155-169.)
- 20 Antoine Bechara, Hannah Damasio, A. Damasio, 'Emotion, Decision Making and the Orbitofrontal Cortex,' *Cerebral Cortex*, 10: 3 (March 2000): 295-307
- 21 Timothy Morton, *Hyperobjects: Philosophy and Ecology after the End of the World*, (University of Minnesota Press, 2013)
- 22 Nathaniel Geiger, Brianna Middlewood, and Janet Swim, *Psychological, Social, and Cultural Barriers to Communicating about Climate Change*, Oxford Research Encyclopedia of Climate Science (2017). Retrieved 22 Oct. 2017, from <http://climatescience.oxfordre.com/view/10.1093/acrefore/9780190228620.001.0001/acrefore-9780190228620-e-377>.
- 23 Many thanks to Mike Powell for first alerting me to Damascius and Hyperignorance by sharing with me his manuscript 'Challenges of Ignorance Draft 2' retrieved from https://ikmewiki.host3.webarch.net/files/1612-Challenging_Ignorance_Pt1_V2.pdf on 16th July 2017
- 24 Raoul Mortley, 'Chapter VII. Damascius and Hyperignorance' in *From Word to Silence 2. The Way of Negation, Christian and Greek*. Paper 8. (1986):122 http://epublications.bond.edu.au/word_to_silence_II/8
- 25 E. R. Dodds, 'The Parmenides of Plato and the Origin of the Neoplatonic 'One',' *The Classical Quarterly*, 22: 3/4 (Jul - Oct, 1928): 129-142
- 26 Mortley, 'From Word to Silence', 123
- 27 See for example Androniki Kalogiratos 'Theology in Philosophy: The Case of the Late Antique Neoplatonist Damascius,' *Skepsis*, XVIII, i-ii (2007): 58-79 and William Franke, 'Apophysis and the turn of philosophy to religion: From Neoplatonic negative theology to postmodern negation of theology', *International Journal for Philosophy of Religion*, 60:1-3 (2006): 61-76
- 28 Many thanks to Dunja Christochowitz for alerting me to Anders' work.
- 29 Pieter E. Vermaas, Peter Kroes, Andrew Light, and Steven Moore, *Philosophy and Design: From Engineering to Architecture* (Dordrecht: Springer Science Business and Media, 2007)
- 30 Weintrobe, 'Anxiety.'
- 31 Marcel Viau, 'La théologie pratique peut-elle être apophasique?,' *Laval théologique et philosophique* 60: 2 (2004): 283-99.
- 32 Johannes Stuekelburger, 'Mirror Reflections: Robert Smithson's Dialectical Concept of Space,' *Canadian Art Review* 31:1-2 (2006): 90-99.
- 33 Robert Smithson, 'Incidents of Mirror-Travel in the Yucatan,' *Artforum* (1969): 1-9.
- 34 Steukelburger, 'Mirror Reflections,' 90-99.
- 35 Barad, 'On Touching', 206-23.
- 36 Idem, 214,
- 37 Marcel Viau, *Practical Theology: A New Approach*, trans. Robert Hurley and Chantal Tanguay (Leiden: Brill, 1999).
- 38 See for example: Ana Cristina Zimmermann and W. John Morgan, 'A Time for Silence? Its Possibilities for Dialogue and for Reflective Learning,' *Studies in Philosophy and Education* 35 (2016): 399.
- 39 S. N. Ganguly, 'Culture, Communication and Silence,' *Philosophy and Phenomenological Research* 29:2 (1968): 182-200.
- 40 Ganguly, 'Silence,' 188.
- 41 Borae Jin and Namkee Park, 'In-Person Contact Begets Calling and Texting: Interpersonal Motives for Cell Phone Use, Face-to-Face Interaction, and Loneliness,' *Cyberpsychology, Behavior, and Social Networking* 13:6 (2010): 611-18. 42 Emmanuel Levinas, 'On Intersubjectivity: Notes on Merleau-Ponty,' in *Outside the Subject*, trans. Michael B Smith (London: Continuum, 1993), 75.
- 43 Shogo Tanaka, 'Intercorporeality as a Theory of Social Cognition,' *Theory & Psychology* 25:4 (2015): 455.
- 44 Shogo Tanaka, 'The notion of Embodied Knowledge,' in *Theoretical psychology: Global Transformations and Challenges*, eds. P. Steiner, et al (Concord, Canada: Captus Press, 2011), 164.
- 45 Audio recordings of the fjords in Bergen, Norway were made using hydrophones during a stay in Bergen, Norway as part of the Pkslo_Deep Dive workshop at Pksel 2015. Microplastics are small particles of plastic that have most often formed due to the breakdown of larger plastic pieces in the environment. These fragments, less than 5mm in diameter, have been found to be ingested by marine life, including corals, causing physical blockages and releasing harmful molecules in their bodies.

- 46 Many thanks to Clare Martynski for our productive conversations exploring the possibilities of assessing the effects of the *Coral Empathy Device*.
- 47 See: <https://katausten.wordpress.com/the-matter-of-the-soul/>.
- 48 Tam, 'Dispositional empathy,' 92–104.

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